

**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R070XD155NM

**Site Name:** Draw

**Precipitation or Climate Zone:** 13 to 18 inches

**Phase:**

## **PHYSIOGRAPHIC FEATURES**

### **Narrative:**

This site occurs in a thin line bordering the large drainageways that dissect the limestone hills. This site receives and transports water from both the remote higher elevations and adjacent sites. Slopes range from 1 to 4 percent. Direction of slope is generally east to southeast but is not significant. Elevations range from 4,000 to 7,000 feet above sea level.

### **Land Form:**

1. Draw
2. Drainageway
- 3.

### **Aspect:**

1. N/A
- 2.
- 3.

	<b>Minimum</b>	<b>Maximum</b>
<b>Elevation (feet)</b>	4,000	7,000
<b>Slope (percent)</b>	1	4
<b>Water Table Depth (inches)</b>	N/A	N/A
<b>Flooding:</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Frequency</b>	Unknown	Unknown
<b>Duration</b>	Unknown	Unknown
<b>Ponding:</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Depth (inches)</b>	Unknown	Unknown
<b>Frequency</b>	Unknown	Unknown
<b>Duration</b>	Unknown	Unknown

### **Runoff Class:**

Negligible to medium.

## **CLIMATIC FEATURES**

### **Narrative:**

The climate of the area is “semi-arid continental.”

Annual average precipitation ranges from 13 to 18 inches. Variations of 5 inches, more or less, are not uncommon. Approximately 70 percent of this occurs from May through October. Most of the summer rains come in the form of high-intensity, short-duration thunderstorms. Winter moisture is usually negligible.

Distinct seasonal changes and large annual and diurnal temperature changes characterize temperatures. The average annual temperature ranges from 55 degrees F to 60 degrees F. With extremes of 20 degrees F below in the winter. To 110 degrees F in the summer are not uncommon.

The average frost-free season is 180 to 200 days, the last killing frost being in early April and the first killing frost in mid October.

Both temperature and precipitation favor warm-season perennial plant community. However, because of the position of this site, there is enough moisture in the late winter and early spring to allow for cool-season species to make up an important component of this site. Runoff plus cold air drainage from higher elevations make this site favorable for cool-season plant growth.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	<b>Minimum</b>	<b>Maximum</b>
<b>Frost-free period (days):</b>	160	191
<b>Freeze-free period (days):</b>	180	221
<b>Mean annual precipitation (inches):</b>	13	18

**Monthly moisture (inches) and temperature (°F) distribution:**

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.47	.56	21.4	56.6
February	.50	.54	23.8	62.1
March	.49	.57	28.5	68.5
April	.54	.60	35.0	76.7
May	1.13	1.44	43.2	83.5
June	1.78	1.84	51.6	92.2
July	1.87	2.98	55.7	92.1
August	2.29	3.26	54.2	90.3
September	2.67	2.80	48.2	84.3
October	1.24	1.40	37.6	76.7
November	.53	.55	27.5	65.5
December	.60	.68	21.6	57.8

**Climate Stations:**

			Period	
Station ID	<u>292865</u>	Location	<u>Elk 2E</u>	From: <u>6/1/1895</u> To: <u>12/31/00</u>
Station ID	<u>294112</u>	Location	<u>Hope</u>	From: <u>03/01/19</u> To: <u>12/31/00</u>

**INFLUENCING WATER FEATURES****Narrative:**

This site is influenced by runoff water and is dominated by riparian type vegetation.

**Wetland description:**

System	Subsystem	Class
N/A		

**If Riverine Wetland System enter Rosgen Stream Type:**

N/A

## **REPRESENTATIVE SOIL FEATURES**

### **Narrative:**

The soils on this site are deep and well drained. Surface textures are loams, silty loams, and clay loams. Permeability is moderate and water-holding capacity is high. The soil profile is often interrupted with cobble or stones.

**Parent Material Kind:** Alluvium

**Parent Material Origin:** Mixed

### **Surface Texture:**

1. Loam
2. Silty loam
3. Clay loam

### **Surface Texture Modifier:**

1. N/A
2.
3.

**Subsurface Texture Group:** Loamy

**Surface Fragments <=3" (% Cover):** N/A

**Surface Fragments >3" (% Cover):** N/A

**Subsurface Fragments <=3" (%Volume):** N/A

**Subsurface Fragments >=3" (%Volume):** N/A

	<b>Minimum</b>	<b>Maximum</b>
<b>Drainage Class:</b>	<u>Well</u>	<u>Well</u>
<b>Permeability Class:</b>	<u>Slow</u>	<u>Moderate</u>
<b>Depth (inches):</b>	<u>60</u>	<u>&gt;72</u>
<b>Electrical Conductivity (mmhos/cm):</b>	<u>Unknown</u>	<u>Unknown</u>
<b>Sodium Absorption Ratio:</b>	<u>Unknown</u>	<u>Unknown</u>
<b>Soil Reaction (1:1 Water):</b>	<u>Unknown</u>	<u>Unknown</u>
<b>Soil Reaction (0.1M CaCl2):</b>	<u>Unknown</u>	<u>Unknown</u>
<b>Available Water Capacity (inches):</b>	<u>9</u>	<u>12</u>
<b>Calcium Carbonate Equivalent (percent):</b>	<u>Unknown</u>	<u>Unknown</u>

## **PLANT COMMUNITIES**

### **Ecological Dynamics of the Site:**

### **Plant Communities and Transitional Pathways (diagram)**

**Plant Community Name:** Historic Climax Plant Community (lower elevations)

**Plant Community Sequence Number:** 1 **Narrative Label:** HCPC

**Plant Community Narrative:** Historic Climax Plant Community

The aspect of this site is dominated by riparian type vegetation, with an understory of mid and tall perennial grasses. Because of the constant flooding of this site, there is a potential for many annual species to occur. Forbs compose most of the annual growth. Because of the cold air drainage, cool-season species are abundant. Pinyon, juniper, and ponderosa pine also occur at higher elevations. The production and composition may vary greatly with elevation.

Canopy Cover:

Trees 10 %

Shrubs and half shrubs 10 %

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs 40

Bare ground 10

Surface cobble and stone 20

Litter (percent) 30

Litter (average depth in cm.) 7

**Plant Community Annual Production (by plant type):** Lower elevations

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	550	825	1,100
Forb	80	120	160
Tree/Shrub/Vine	400	600	800
Lichen			
Moss			
Microbiotic Crusts			
Total	1,000	1,500	2,000

## **Plant Community Composition and Group Annual Production:**

### **Plant Type - Grass/Grasslike**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	SPWR2	Giant Sacaton	150 – 450	150 – 450
2	BOCU	Sideoats Grama	150 – 300	150 – 300
3	PAOB	Vine-mesquite	75 – 150	75 – 150
4	SONU2	Indiangrass	75 – 150	75 – 150
5	PASM	Western Wheatgrass	75 – 150	75 – 150
6	ELEL5	Bottlebrush Squirreltail	30 – 75	30 – 75
7	BOSA BOBA3 SCSC	Silver Bluestem Cane Bluestem Little Bluestem	75 – 225	75 – 225
8	SEVU2	Plains Bristlegrass	75 – 150	75 – 150
9	BOGR2	Blue Grama	150 – 375	150 – 375
10	2GRAM	Other Grasses	75 – 150	75 - 150

### **Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	SPHAE	Globemallow spp.	15 – 60	15 – 60
12	ARCA11	Sagewort spp.	15 – 45	15 – 45
13	HEAN3	Annual Sunflower	15 – 45	15 – 45
14	2FORB	Other Forbs	30 – 75	30 - 75

### **Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
15	JUMA	New Mexico Walnut	75 – 225	75 – 225
16	CHLI2	Desert Willow	75 – 150	75 – 150
17	ATCA2	Fourwing Saltbush	30 – 60	30 – 60
18	CEPA8	Desert Hackberry	15 – 45	15 – 45
19	FAPA	Apacheplume	75 – 150	75 – 150
20	ACGR	Catclaw Acacia	30 – 75	30 – 75
21	RHTR RHMI3	Skunkbush Sumac Littleleaf Sumac	15 – 45	15 – 45
22	GUSA2	Broom Snakeweed	15 – 30	15 – 30
23	BASA2	Broom Baccharis	15 – 60	15 – 60
24	2SD	Other Shrubs	75 – 150	75 – 150



**Plant Type - Lichen**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Type - Moss**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Type - Microbiotic Crusts**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other grasses which would appear on this site include: hairy grama, bullgrass, deergrass, carex spp., dropseed spp., threeawn spp., big bluestem, switchgrass, Canadian wildrye, wolftail, green sprangletop, plains lovegrass, Hall's panicum, New Mexico feathergrass, littleawn needlegrass, and tridens spp.

Other shrubs include: bristlebush, winterfat, oak spp., yerba-de-pasmo, mock orange, mariola, canyon grape, yucca spp., willow spp., poison ivy, ephedra spp., virginsbower, hairy mountainmahogany, algerita, and manzanita.

Other forbs include: desert holly, wildbuckwheat, blanker flower, verbena, cudweed, mullin, prickleaf, dogweed, wooly loco, cutleaf haplopappus, threadleaf groundsel, wooly Indianwheat, prickly poppy, whorled milkweed, and Indian paintbrush.

Scattered trees include: juniper, pinyon and ponderosa pine.

**Plant Growth Curves**

Growth Curve ID 4605NM

Growth Curve Name: HCPC

Growth Curve Description: Riparian vegetation with mixed mid and tall perennial grasses with a large forb component and scattered trees at higher elevations.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

Plant Community Name: Historic Climax Plant Community ( higher elevations)

Plant Community Sequence Number: 2

Plant Community Narrative: Same as above Narrative Label: HCPC

Ground Cover and Structure: presently being revised.

**Plant Community Annual Production (by plant type):** higher elevations

<b>Annual Production (lbs/ac)</b>			
<b>Plant Type</b>	<b>Low</b>	<b>RV</b>	<b>High</b>
<b>Grass/Grasslike</b>	825	1,238	1,650
<b>Forb</b>	120	180	240
<b>Shrub/Vine</b>	600	900	1,200
<b>Tree</b>			
<b>Lichen</b>			
<b>Moss</b>			
<b>Microbiotic Crusts</b>			
<b>Total</b>	1,500	2,250	3,000

**Plant Community Composition and Group Annual Production:**

**Plant Type - Grass/Grasslike**

<b>Group Number</b>	<b>Scientific Plant Symbol</b>	<b>Common Name</b>	<b>Species Annual Production</b>	<b>Group Annual Production</b>
1	SPWR2	Giant Sacaton	225 – 675	225 – 675
2	BOCU	Sideoats Grama	225 – 450	225 – 450
3	PAOB	Vine-mesquite	113 – 225	113 – 225
4	SONU2	Indiangrass	113 – 225	113 – 225
5	PASM	Western Wheatgrass	113 – 225	113 – 225
6	ELEL5	Bottlebrush Squirreltail	45 – 113	45 – 113
7	BOSA BOBS3 SCSC	Silver Bluestem Cane Bluestem Little Bluestem	113 – 338	113 – 338
8	SEVU2	Plains Bristlegrass	113 – 225	113 – 225
9	BOGR2	Blue Grama	225 – 563	225 – 563
10	2GRAM	Other Grasses	113 – 225	113 - 225

**Plant Type - Forb**

<b>Group Number</b>	<b>Scientific Plant Symbol</b>	<b>Common Name</b>	<b>Species Annual Production</b>	<b>Group Annual Production</b>
11	SPHAE	Globemallow spp.	23 – 90	23 – 90
12	ARTEM	Sagewort spp.	23 – 68	23 – 68
13	HEAN3	Annual Sunflower	23 – 68	23 – 38
14	2FORB	Other Forbs	45 – 113	45 - 113

**Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
15	JUMA	New Mexico Walnut	113 – 338	113 – 338
16	CHLI2	Desert Willow	113 – 225	113 – 225
17	ATCA2	Fourwing Saltbush	45 – 90	45 – 90
18	CEPA8	Desert Hackberry	23 – 68	23 – 68
19	FAPA	Apacheplume	113 – 225	113 – 225
20	ACGR	Catclaw Acacia	45 – 113	45 – 113
21	RHTR RHMI3	Skunkbush Sumac Littleleaf Sumac	23 – 68	23 – 68
22	GUSA2	Broom Snakeweed	23 – 45	23 – 45
23	BASA2	Broom Baccharis	23 – 90	23 – 90
24	2SD	Other Shrubs	113 – 225	113 – 225

**Plant Type - Lichen**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Type - Moss**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Type - Microbiotic Crusts**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Growth Curves**Growth Curve ID 4605NMGrowth Curve Name: HCPC

Growth Curve Description: Riparian vegetation with mixed mid and tall perennial grasses with a large forb component and scattered trees at higher elevations.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

## **ECOLOGICAL SITE INTERPRETATIONS**

### **Animal Community:**

This site provides habitat which supports a resident animal community characterized by mule deer, desert cottontail, spotted ground squirrel, gray fox, coyote, bobcat, Swainson's hawk, mockingbird, loggerhead shrike, mourning dove, scaled quail, and western diamondback rattlesnake.

### **Hydrology Functions:**

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

<b>Hydrologic Interpretations</b>	
<b>Soil Series</b>	<b>Hydrologic Group</b>
Pecos	D

### **Recreational Uses:**

This site has good potential for hiking, backpacking, horseback riding, camping, and picnicking. However, care must be taken to avoid being caught in flash floods. These floods can occur even though it does not rain on the site. Hunting for quail, deer, and varmints is good. Deer hunting is fair. Trapping for fur-bearing animals is good.

### **Wood Products:**

This site produces a limited amount of wood for fencing material and fuelwood. New Mexico walnut is used for gunstocks.

**Other Products:****Grazing:**

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. Because of the cool-season species and abundance of high quality shrubs, this site is especially useful in the winter and early spring. This site provides an important protein source during this period. Consequently, this site is much more important than its area indicates. This site will respond well to a planned grazing system, which rotates the season of use. If this site is continually mismanaged, there will be a decline in the cool-season species, more desirable warm-season grasses and the desirable shrubs. In a deteriorated condition, this site is extremely susceptible to water erosion primarily from the flooding. When grazing sheep or goats and during calving season, predator control should be provided.

**Other Information:****Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month**

<b>Similarity Index</b>	<b>Ac/AUM</b>
100 - 76	1.8 – 2.5
75 – 51	2.0 – 4.0
50 – 26	3.8 – 5.0
25 – 0	5.0+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

**Plant Preference by Animal Kind:**

**Animal Kind:** Livestock

**Animal Type:** Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	D	D	D	D
Indiangrass	Sorghastrum nutans	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Cane Bluestem	Bothriochloa barbinodis	EP	U	U	U	U	U	U	P	P	D	U	U	U
Little Bluestem	Schizachyrium scoparium	EP	D	D	D	P	P	P	P	D	D	D	D	D
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Fourwing Saltbush	Atriplex canescens	EP	P	P	P	P	P	D	D	D	D	D	D	P

**Animal Kind:** Livestock

**Animal Type:** Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	U	U	D	D	D	D	D	D	D	D	D	U
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	D	D	D	D
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	U	U	U	U
Indiangrass	Sorghastrum nutans	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Wildbuckwheat	Eriogonum spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Globemallow	Sphaeralcea spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U

**Animal Kind:** Livestock

**Animal Type:** Goats

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	U	U	P	P	P	U	U	U	U	U	U	U
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Indiangrass	Sorghastrum nutans	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Fourwing Saltbush	Atriplex canescens	EP	P	P	D	D	D	D	D	D	D	D	D	P
Apacheplume	Fallugia paradoxa	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

## **SUPPORTING INFORMATION**

### **Associated sites:**

Site Name	Site ID	Site Narrative

### **Similar sites:**

Site Name	Site ID	Site Narrative

### **State Correlation:**

This site has been correlated with the following sites: \_\_\_\_\_

### **Inventory Data References:**

Data Source	# of Records	Sample Period	State	County

### **Type Locality:**

State: New Mexico

County: Chavez, Eddy, Lincoln, Otero

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Township: \_\_\_\_\_

Range: \_\_\_\_\_

Section: \_\_\_\_\_

Is the type locality sensitive?    Yes ☐        No ☐

General Legal Description: \_\_\_\_\_

### **Relationship to Other Established Classifications:**

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### **Other References:**

Data collection for this site was done in conjunction with the progressive soil surveys within the Pecos-Canadian Plains and Valleys 70 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Otero, Eddy, Chaves, Lincoln

### **Characteristic Soils Are:**

Pecos	
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### **Other Soils included are:**

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### **Site Description Approval:**

<b><u>Author</u></b>	<b><u>Date</u></b>	<b><u>Approval</u></b>	<b><u>Date</u></b>
Don Sylvester	02/02/82	Donald H. Fulton	03/03/82

### **Site Description Revision:**

<b><u>Author</u></b>	<b><u>Date</u></b>	<b><u>Approval</u></b>	<b><u>Date</u></b>
Elizabeth Wright	07/10/02	George Chavez	12/17/02